The Plywood Industry in BC
Part 1: The Rise and Boom
by Bob Griffin

The use of wood veneer is not new. The Egyptians made furniture with it over 3,500 years ago, and many of the great English furniture makers such as Sheridan used veneer as a raw material. But the sheets of veneer glued together into panels known as plywood are of recent origin, a new product of the 20th century.

The manner in which plywood production developed in BC had never before been studied when I selected it for my PhD thesis. When I searched through forgotten company archives, I discovered that, while the plywood industry is only a small part of the forest industry, it has played a crucial role in the growth and financial success of several of BC's biggest forest companies. Its history is one plagued with difficulties and instability, first growing into a large and prosperous coastal industry which then declined to near extinction while plywood plants in the Interior expanded their production - within the short span of 87 years. I also uncovered an interesting story of how manufacturers aggressively transformed Canadians into the largest per-capita consumers of plywood in the world.

Plywood is produced by peeling a log into thin sheets of veneer which are clipped to size, dried, and glued in three, five or seven layers to form a panel that usually measures 1.2 m x 2.4 m (4 ft x 8 ft).

British Columbia's first plywood plant went into production in 1913 at Fraser Mills (Coquitlam), just eight years after the first West Coast softwood plywood plant went into production at Portland, Oregon. Before WW II, plywood was manufactured using animal and casein glues and therefore was not waterproof. The Canadian Western Lumber Company plant produced and used this non-waterproof plywood, made from Douglas-fir veneer, for the faces and inset panels of doors. Three years later, BC's next plant opened in New Westminster, the Laminated Materials Company. It was followed in 1928 by the B.C. Veneer Works at Nelson.

These last two plants specialized in the production of hardwood plywood, using cottonwood to face their panels which were then used mainly to manufacture crates, boxes, and furniture. The Royal BC Museum recently added to its collection a Hoosier (portable kitchen cabinet) from Princeton, made in Vancouver about 1916 and backed with cottonwood plywood from the Laminated Materials Company plant. Similar plywood was also used as interior paneling for home improvements - many homes in Nelson were decorated with cottonwood paneling from the Nelson plant, especially during the 1930s.

Times were difficult, however, and the Laminated Materials Company went bankrupt in 1931. It used several tactics to stay in business, producing imported mahogany panels and buying cottonwood logs from as far away as the Skeena River. The mahogany panels, however, did not sell as well as was hoped, and many of the heavy cottonwood logs sank while being towed from Prince Rupert. B.C. Veneer Works survived somewhat longer, until 1945, when it an

nounced it could no longer secure an adequate supply of cottonwood logs and closed.

The future of British Columbia's plywood industry, however, would not be in cottonwood but in Douglas-fir plywood, the kind Canadian Western was manufacturing at Fraser Mills. In 1935, the H.R. MacMillan Export Company (MacMillan Bloedel) opened BC's second softwood plywood plant in Vancouver. The industry boomed. The multilayered panels were now glued with a phenol resin which produced a new, waterproof product. It filled an essential need - the construction of aircraft and ships and housing during World War II. Plants such as Pacific Veneer in New Westminster, for example, produced a special plywood- three-ply birch using glue-coated rice paper to bind the layers together - for use in fuselages and wings. After the war, more plywood plants opened including Western Plywood's Kent Avenue plant in Vancouver (1945-1995) and British Columbia Forest Products' Victoria plant (1952-1983).

Throughout the war, the H.R. MacMillan Export Company had been touting the advantages of plywood, an advertising campaign it stepped up to develop the domestic market at war's end.

The industry was determined to create a demand for sanded, Douglas-fir plywood across Canada. Plywood manufacturers, in cooperation with the Plywood Manufacturers Association of B.C., began promoting it as a substitute for lumber in several building applications, especially as roof, floor and wall sheathing and for use in concrete form work. They induced government regulators and building inspectors to include plywood in building codes, presented lectures, provided information, undertook testing and pointed out plywood's good qualities. They focused on convincing builders, engineers and architects to use plywood instead of lumber. Plywood was advertised in magazines. Building plans were distributed and exhibits created for trades shows.

The manufacturers did not completely neglect homeowners, and specialty panels such as Etch Wood or V-Groove were were advertised to attract them. Plans for kitchen cupboards, book shelves, beds and all kinds of household improvements were prepared and distributed. Plywood was also promoted as the ideal product for building sailing crafts such as small Sabot-class pleasure boats.

Lead by MacMillan Bloedel, the industry created a complete distribution and sales network across Canada. Warehouses were built; salespeople were hired. By 1960, the four largest manufacturers were operating 44 company-owned warehouses scattered across the country and employing about 150 salespeople. Theirs was no simple task - potential customers had to be convinced to give up lumber and use plywood.

Competition for market share among manufacturers was bitter during the 1950s and 1960s. During the early, hectic days of the 1950s, sales would dramatically move up and down as each company jockeyed for position. Western Plywood's (Weldwood's) Sales Manager noted, for example, "the undercurrent of chiselling and intrigue has been more than a little fascinating." Sometimes strange and dramatic exhortions were made, such as when MacMillan Bloedel told its sales force to get the Kitimat contracts or heads would roll. It was a time of unpredictability. Sometimes customers were "screaming for more plywood," but six months later the warehouses would be filled to overflowing, with few sales in sight.

Despite the chaos of the market, the 1950s and 1960s were the prosperous years for plywood production in BC. And it was the large profits from plywood that helped finance new investments by the forest companies - in timber and pulp-and-paper production.

The forest industry as a whole, however, was undergoing dramatic changes - changes that would result in a very different plywood industry. In Part II, I will examine these changes and bring the story to British Columbia's plywood industry up to the present day.

The Plywood Industry in BC
Part II: The Decline of a Coastal Industry
by Bob Griffin

The 1950s and 1960s were the prosperous years for coastal plywood manufacturers in BC. (See "**The Rise and Boom**" article.) But by 1998, 10 of the 11 giant coastal plants had closed. These plants depended on large, old-growth Douglas-fir trees for raw material, and when the forest industry started changing, the prime timber of the past became scarce and expensive. Was this the primary cause of the decline of a booming industry? Certainly it was a contributing factor, but to ascribe all the industry's problems to one cause hides a more complex history.

Plywood makers, almost from the moment they began production, had realized the difficulty of developing a stable supply of logs. During the 1920s and 1930s, logging operators supplying Canadian Western discovered that logs of the right kind were scarce. Bob Filberg, on of BC's best known loggers, complained to the company in 1930 that it is "getting tough to find big clear logs."[1] John Bene, soon-to-be president of Western Plywood (eventually Weldwood of Canada), reported in 1943 that "the amount of so-called peeler logs will grow scarcer every year...and the plants will have to change their technique so that they can make plywood from a lower grade of logs than they now use."[2] Obtaining logs was exacerbated in the 1980s when it became more profitable to turn large Douglas-fir logs into lumber instead. The prime timber of the past was no longer available.

New plywood plants, however, were springing up in the Interior, the first at Quesnel in 1951 followed by others in the 1950s and 1960s. These plants demonstrated that plywood could be profitably produced from small-diameter timber.

On another front, new products were challenging British Columbia's softwood plywood industry. Substitutes such as particleboard and hardboard were replacing plywood for interior panelling, furniture manufacturing and special applications. Cheaper to produce, these products were made from what was once considered waste material (small logs and forest-wood residue).

Again, this was not a new threat. MacMillan Bloedel market researchers reported to company executives the dangers of hardboard as early as 1950, before plywood was even established as a significant product. In the early 1960s, when plywood dominated the Canadian market, researchers continued to warn company managers: "Fir plywood is becoming increasingly vulnerable to inroads from new panel products."[3] Large coastal producers showed little concern, however, since the early alternative panels could not substitute for plywood in its largest market: building construction. The huge building materials market seemed secure.

It was Canada's largest coastal-plywood manufacturer, Macmillan Bloedel, which took a major step to undermine plywood's market dominance in the construction industry from within. In 1965, the company placed North America's first commercially successful waferboard plant into production at Hudson's Bay, Saskatchewan. The success of waferboard (panel made from large wood chips) convinced their executives in the 1970s that it was the panel product

of the future, and in 1978, they announced the closure of their Vancouver Division, BC's largest plywood plant. Protests delayed the closure until 1983, but it heralded the forthcoming near extinction of a coastal industry.

The industry was now under attack. Consumers saw waferboard and orientated strand board as cheaper alternatives. Internally, companies shifted their best timber from their plywood plants to the sawmills. The huge coastal plants were viewed as a drag on company profits.

The closure of the Macmillan Bloedel plant was swiftly followed by others. British Columbia Forest Products' Victoria plant closed in 1983; BC's second-largest plywood plant, Canadian Forest Products' New Westminster plant, ceased operation in 1985. In 1989, British Columbia oldest plant, established in 1913 at Fraser Mills, closed. In 1990, Weldwood sold its largest Vancouver Kent Avenue plant, which then struggled along under cooperative ownership until finally ceasing operation in 1995.

All the large manufacturers closed and sold their plants. By the end of 1998, only one coastal plant out of the original 11 remained in production: Richmond Plywood. Established as a cooperative in 1956, it was once the poor cousin of the large coastal mills, scrambling for peeler logs wherever it could find them. It weathered the storm and continues to successfully operate today.

This, perhaps, seems like a dirge for BC plywood and it is - for one part of the industry. The marvellous sheets of sanded Douglas-fir that once flowed from coastal plywood mills will probably never appear again, but plywood production continues to be a flourishing industry in the Interior.

The Interior's first softwood plywood plant, built by Western Plywood at Quesnel in 1951, continues to operate, as does it sister facility at Williams Lake built in 1978 by Weldwood (the successor company to Western Plywood). Plywood plants at Hefley Creek, Armstrong, Kelowna, Canoe, Golden, Prince George and Fort Nelson are all successful and profitable operations. The only Interior softwood-plywood mills to close to date have been the Kootenay Forest Products plant at Nelson and Weldwood's plant at 100 Mile House.

Plywood production went into decline after 1978, but by 1991, total plywood sales exceeded those of the 1960s, and continue to show no signs of decline. Exports have increased, and plywood is still the preferred product in many sheathing applications despite its higher cost. What has largely passed away are the huge coastal mills which manufactured plywood of such high quality that visiting American manufacturers expressed jealousy.

Did our coastal plywood industry really need to disappear? Although faced with severe economic and resource problems, I think it could have survived, but business and government leaders would have needed to commit to recreating an industry that most saw as fading in value. And why should they, when the larger sawmill and pulp-and-paper industries were also facing shortages of raw materials?

1. R.J. Filbert to H.J. Mackin, October 30, 1930, File Mackin 1930, Comox Logging Collection, Courtenay Museum.
2. John Bene to Norman Wright, London, July 15, 1943, File Leary, Box 9B, Weldwood Collection, RBCM.
3. J.S. Blake & J.A. Bergstrom, "Sylvaply Plywood, Canadian Market Survey and Sales Forecast 1962-1966," Jan. 15, 1962, Box 121-21, Macmillan Bloedel Collection, UBC, Main Library, Special Collections.